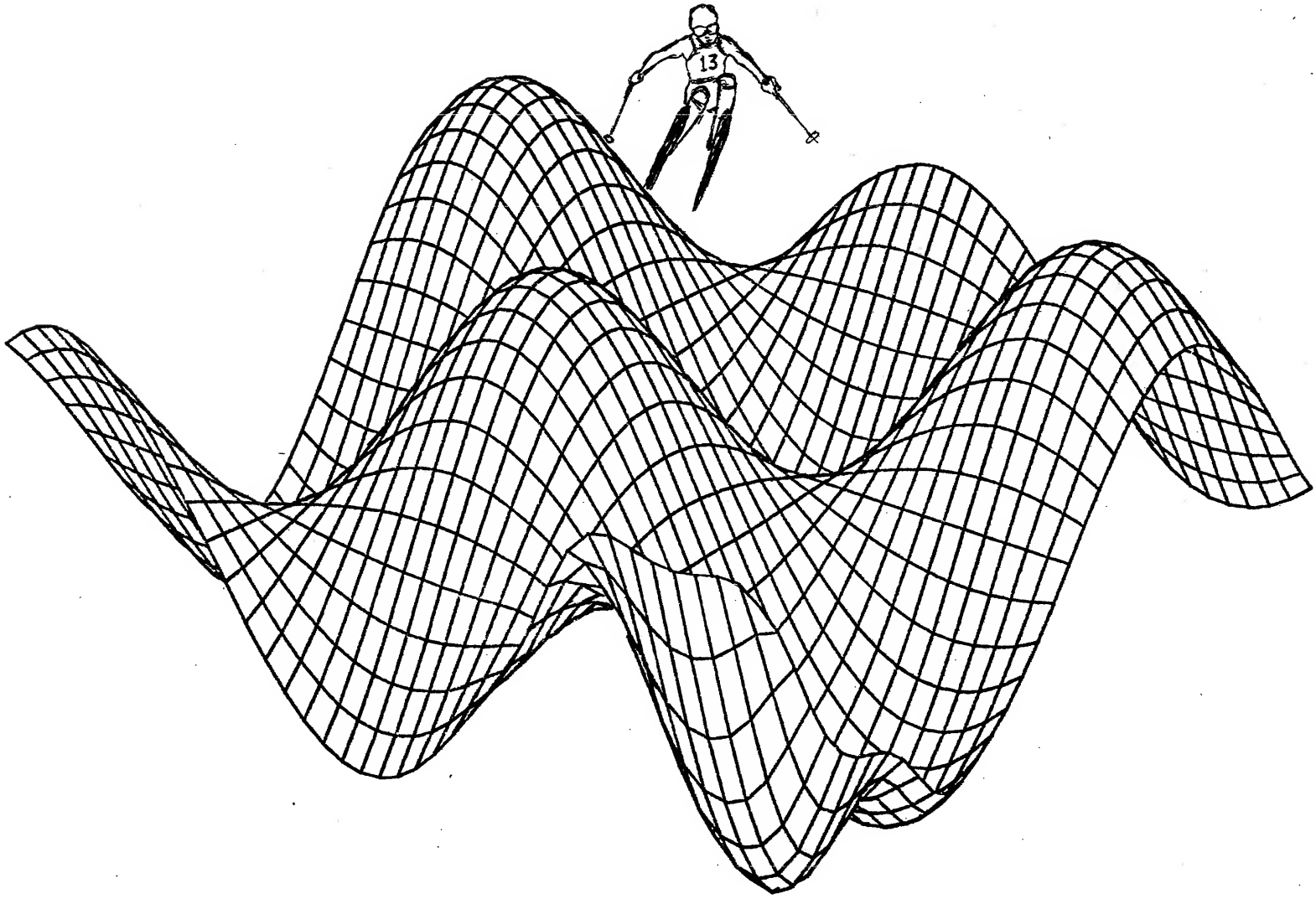
ACCESS

NEWSLETTER OF THE OREGON STATE UNIVERSITY MILNE COMPUTER CENTER

Vol. XIII, No. 1, Jan./Feb., 1978



MILNE COMPUTER CENTER

OREGON STATE UNIVERSITY

MANAGEMENT:

Director--Thomas L. Yates
Assistant Director--Christopher C. Calligan
Manager Data Processing Systems--Anthony J. White
Manager Operations and Programming Services--Ronald A. Davis
Manager Communications and Hardware--James W. Fryklund
Manager Educational Computing Services--JoAnn Baughman
Manager Systems Software--William Hunteman
Business Manager--Michael McQueen

OFFICE SERVICES

General Information	754-2494
Job Numbers--Gayle Zandofsky.	754-3483
Billing (Accounts Receivable)--Hilary Detering.	754-4183
Purchasing (Accounts Payable)	754-2638
Manuals for sale--Hilary Detering	754-4183
Newsletter--Jody Bowles	754-2494
Instructional Computing Requests--Dorrie Lemon.	754-2494
Unsponsored Research Grants--Dorrie Lemon	754-2494
Editorial Consultant--Ellen T. Drake.	754-2494

PRODUCTION SERVICES

Card Sorting, Interpreting, etc	754-3584
Digitizing--RJay Murray	754-4156
Input/Output Area	754-3584
Computer Supervisor--Dan Berg	
Day Supervisor--Dale Hannon	
Night Supervisor--Clyde Webb	
Keypunching and Verifying--Verna Wohlers.	754-2494
Magnetic Tape Librarian--Cindy Fancher	754-3584
Optical Scanning--George Beekman.	754-2494
Purged Files--I/O room	754-3584
Terminal Connection	754-2033
Testing Services--George Beekman.	754-2494
Time-Sharing Services	
CYBER 73 300 Baud	754-3781
CYBER 73 110 Baud	754-3761
3300 300 Baud	754-3651, 754-3536
3300 110 Baud	754-4111

PROGRAMMING QUESTIONS--refer to CONSULTANT, Room 150. 754-3474

HARDWARE SERVICES

Teletype--Doug West, Gary Jarman.	754-2455, 754-2494
Electronic Terminals-- Randy Grainger	754-2494
Statewide Network--Dennis Johanson	754-2494

Access

NEWSLETTER OF THE OREGON STATE UNIVERSITY MILNE COMPUTER CENTER

Ellen T. Drake, editor

Volume XIII, Number 1 January/February,1978

In this issue:

Information in this newsletter is current as of January 1, 1978

EDITOR'S CORNER

Access wishes all our users a Very Happy New Year! The Computer Center will bring new and better services to our users this year. Some of these innovations are announced in this issue of Access. For example, an instructor of a class or research project leader using the CYBER, through our NOS PROFILE, will have greater flexibility in controlling his/her own account; a new feature has been added to the Center test scoring system that will allow a test to be divided into several parts and scored independently so that the professor can better assess a student's understanding of a subject. Our New Year's Resolution: The Computer Center will continue to develop its services and capabilities to help the users.

MICROFICHE OUTPUT AVAILABLE THROUGH EXECUTIVE DEPARTMENT IN SALEM

A service has been available to our users for some time which has not been widely publicized but is potentially quite valuable. It involves the ability to produce output on 105 mm microfiche instead of on paper using the line printer. This is accomplished by writing the specially-formatted output on a magnetic tape, and then sending the tape to the Executive Department in Salem for final processing. Subroutines are available on the CYBER which automatically format the magnetic tape, and the Executive Department provides overnight service via the Salem shuttle bus.

Although microfiche is not suitable for all, or even most, applications, it does excel where a large amount of archival printed data is to be stored in a manner which makes it available for immediate reference. A microfiche reader is necessary to inspect the data, but this equipment is becoming more readily available as industry and professional societies publish more and more of their material in this format. The savings which can be effected are considerable. As an example, it would cost approximately $170 to print 150,000 lines of output on the line printer during prime shift ($128 on second or third shift). However, two copies of the same output can be printed on microfiche at Salem for $16, exclusive of the cost of generating the magnetic tape, and they would occupy a total of only 28 fiche. For further information concerning this alternative to printing, contact the Consultants in MCC 150 x3474.

TEST SCORING SERVICE NEWS: NEW FEATURE

A new feature has been added to the Computer Center Test Scoring System to make it suit a wider range of instructional and research needs. The PARTS option makes it possible to divide any test into up to six independent parts. These parts are each scored as separate tests within the larger exam.

Student scores on each part are printed along with total scores on the alphabetic, social security number, and rank-ordered listings. This makes it possible to monitor

student progress on several different subjects (such as spelling and grammar) or different study areas (lecture, lab, readings).

In addition, the item analysis statistics are computed for each item in relation to the test as a whole and to the appropriate test part. This gives the instructor additional feedback on the value of each test question and the fairness of the test and each test part.

The questions for the different test parts may be kept separate or intermixed in any order, but no item may belong to more than one test part.

The best news, though, is that there is no extra charge for the scoring of exams with the PARTS option.

A "Scoring by PARTS" addendum to the Test Scoring Service Instructor's Handbook is available, with or without the Handbook, in Room 142 of the Computer Center. (If you already have the handbook, you should receive a copy of the addendum via campus mail soon.)

If you have any additional questions, contact George Beekman at ext. 2494.

ERRATUM

Please note that the terminal in Cordley 4050 was erroneously listed in the last issue of Access among the terminals available to the OSU community. This terminal is reserved for the exclusive use of the Plant Analysis Laboratory.

LIMITED 9-TRACK TAPE CAPABILITY AVAILABLE

The Computer Center has tested, and is now making available to the public, a limited nine-track magnetic tape capability. This is accomplished by using the tape drive on the DATA 100 Remote Job Entry (RJE) terminal acquired last summer, in conjunction with the EXPORT/IMPORT remote batch facility on the CYBER. Although the nine-track tapes themselves must be read or written in the EBCDIC character set, the RJE automatically converts the characters into the standard codes used by the CYBER. The RJE can also automatically block or unblock the tapes if the block size is 8000 characters or less. Because all of the data must be transmitted to the CYBER over telephone lines, the transfer rate is quite slow, and more than an hour is required to read or write 10,000 card images. For additional information concerning this service, contact Ron Davis at x2494.

COMPUTER CENTER TO REPLACE TELETYPE TERMINALS

Part of the Center's public teletype terminals will be replaced this spring by teletype compatible CRT terminals. A Request for Proposals has been issued to qualified vendors to bid on providing 35 or more such terminals. The Center hopes that the selected bid will be at a unit price attractive to other departments that will be acquiring interactive terminals this year. Contact Ron Davis x2494 for more information.

NOS MASTER USER SYSTEM

Under the NOS PROFILE system an instructor or a project leader (called a Master User) can now have more flexibility in controlling access to his/her projects, allocating different SRU limits to students or research colleagues, activating or deactivating project numbers, etc. The Master User can "inquire" about the status of projects under the current charge number, "list" the values of various accounting values, and "update" the status of projects. All PROFILE operations can be performed using either batch processing or a time-sharing terminal.

The "NOS PROFILE Master User Guide" describing this system in detail is now available on request.

CYBER users desiring the Master User Guide and charge numbers with the Master User capability should contact the Computer Center Job Number Desk, MCC 140, ext. 3483.

CYBER COMPLOT NEWS

The Computer Center wishes to thank those users who took the time to fill out the Computer Graphics Enhancement Survey distributed last November. The return rate has been very gratifying. We also wish to apologize to those to whom the survey was not applicable for any inconvenience it may have caused. In order to get the widest possible circulation, the distribution list was derived from the Computer Center's user number files. However, since we had no way of knowing which users do and do not use computer graphics, surveys were unavoidably mailed to some users who have no interest or knowledge of the subject. Any users who desire to express their opinions concerning the future of computer graphics at OSU but did not receive a survey form may request one by calling Dave Fuhrer or Mike Drost at x2953. A report on the survey results and the Computer Center's response thereto will appear in the next issue of Access.

The subroutine TK4010 will be deleted from the CYBER COMPLOT library shortly after the publication of this issue of Access. The subroutine is no longer needed because, by default, CYBER COMPLOT assumes that a Tekterminal is a Model 4010. If a different model is to be used, subroutine TKTYPE is available to make the appropriate change.

AN UPDATED LIST OF ACADEMIC USERS COUNCIL MEMBERS (1977-78)

Please note that the list of members printed in the last issue of Access (November/December 1977) was incomplete. The following persons are current members:

Allen, John S., Oceanography
Anderson, Edwin L., Education
Bregar, William S., Computer Science
Brown, William G., Ag & Resource Econ.
Conklin, Frank S., Ag & Resource Econ.
Gemperle, Michael, Oceanography
Hudspeth, Robert, Civil Engineering
Mobley, Robert, Climatic Res. Inst.
Peterson, Roger G., Statistics
Shepard, W. Bruce, Political Science
Stone, Solon, School of Engineering
Tedder, Philip, Forestry
Tyler, Albert, Marine Science Center
Vanderplaat, Andy, Ag. Fiscal Office

JOB NUMBER SECURITY IS EVERYBODY'S BUSINESS

Passwords and user security codes are the user's first line of defense against unauthorized use of their computing budgets. Unfortunately some users get a false sense of security when they use easily guessed codes, such as the first four letters of their names. Individuals intent on stealing computer dollars can often "break" simple-minded passwords once they know the identity of a user and that person's job number. So save yourself some unnecessary grief by using obscure codes - and change them frequently.

CYBER DISK UPGRADE

The CYBER disk capacity will be increased this spring when two of the four Model 844-21 disk drives are replaced with double density model 844-41 drives. The increased capacity will provide 234 million additional characters of storage and could conceivably result in a reduction in CYBER file charges next year.

SCIENTIFIC INFORMATION RETRIEVAL — SIR

Scientific Information Retrieval (SIR) is a software package designed to provide management of data files. The commands used by SIR are patterned after those used by SPSS(Statistical Package for the Social Sciences).

SIR is a hierarchical data management system that permits the user to establish hierarchical relationships among groups of data items (called records) and then use these relationships when retrieving data.

The user may use SIR to generate reports from the data, or may create data files to be used as input for analysis by SPSS or BMDP (Bio-medical computer programs).

User manuals for SIR are available in the Computer Center Business Office. Instructions on the use of SIR at OSU are included in the manual.

VIDEOTAPE SHOWING

Videotapes which introduce the new computer user to the OS-3 system and to FORTRAN will be shown Winter Term beginning January 16. Scheduled showings are:

"Introducation to OS-3"
January 16-20 10:30 am
January 16-23 7:00 pm

"Introduction to FORTRAN"
January 23 - Feb. 3 10:30 am
January 24 - Feb. 8 7:00 pm

All showings are over Cable Channel 5 and may be watched in Kidder 108J. Morning sessions are Monday through Friday; evening sessions are Monday through Thursday.

CYBER ACCOUNTING

CYBER users are reminded that charges for wall clock time, magnetic tape mounts, and any printing or card punching are <u>not</u> included in the SRU value printed when logging off or at the end of a batch job.

LOCKER STORAGE AVAILABLE

Users with valid account numbers can now rent lockable metal storage lockers at the Computer Center. We have eighteen lockers that measure 12"x15"x15", a convenient size for most tapes, papers and whatever else a user wants for safekeeping between trips to the Center. Users with account numbers which have a 1, 2, 4, 5, or 8 in the thousands place (e.g. 784123) may obtain a locker at the I/O counter. The rental fee is one dollar per month; the minimum billing is a dollar.

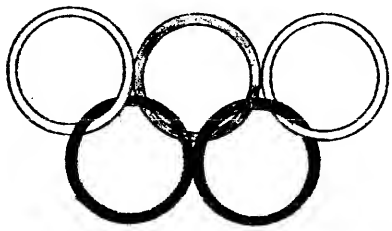
XREF:

THE COMPUTER AT THE OLYMPICS

The governments of some countries, bent on amassing as many Olympic gold medals as they can, are encouraging their star athletes to marry each other so that their offsprings might inherit their parents' athletic talents. Here in America we recognize that love and marriage cannot be decreed, but thanks to computer technology and Gideon Ariel, American athletes might end up with a few more golds in the future.

According to a recent article in Sports Illustrated that Dan Berg brought to our attention, Gideon Ariel of Amherst, Massachusetts, has programmed the computer to assess, from motion pictures, the complex relationships of an athlete's many moving parts in a frame-by-frame, body-segment-by-body-segment analysis.

From such an analysis of films taken of the twelve best American discus throwers, Ariel's printouts showed a consistent pattern in the best throws. One thrower, Mac Wilkins, was told that his front leg was absorbing energy that could go into the throw and that if he could focus all forces in a perfectly-timed throw, he had the potential of throwing the discus 250 feet. Wilkins' best throw at the time was 219'1" and the world record was 226'8"; however, the second and third times Wilkins put Ariel's advice into practice, he broke the world record at 232'6" and won the Olympic gold medal at Montreal. Wilkins' confidence that he will reach his 250-feet potential is supported by the computer analysis based on Newtonian physics and therefore not a Muhammed Ali type boast. Isn't the computer wonderful? -E.T.D.



OPERATING STATISTICS

	Oct 76	OCT 77
Batch Logons 3300	7892	8173
Batch Logons CYBER	8554	15710
Terminal Logons 3300	21848	16533
Terminal Logons CYBER	8329	10786

FEP-A PORT ADDITIONS

The front end communications facilities have been augmented in terms of increasing the computer port capacity by 224 ports. The Computer Center staff is in the process of bringing these added facilities on-line and connecting users. This latter activity of connecting users will be a continuous process extended over winter term. Ultimately, these facilities and other changes being made will provide more users with dedicated connections to computer ports, telecommunication facilities at the desired data rates and greater access to FEP-A. This system provides a switching service so that users can select the desired host via keyboard input from the interactive terminal.

THE DIAL-UP LINES

All of these lines now go into Front End Processor (FEP-A) which allows the user to select either NOS or OS-3.

Phone No.	Baud Rate	Number of Lines	
754-4111	110	5	103 Type data set
754-3761	110	3	103 Type data set
754-3781	300	10	103 Type data set
754-3536	300	6	103 Type data set
754-2521	1200	2	202 Type data set
754-3122	1200	2	212A Type data set

Each of the above listed numbers is the pilot number for a "trunk-hunting group" of numbers in the categories indicated. You should get a busy signal only if all of the lines in the group are busy, and the only time that the phone should ring, but not answer, is when the system is down.

Please report any problems that you may experience to the I/O desk, 754-2033, and indicate the phone number dialed and port number if available.

The synchronous dial-up ports for remote job entry terminals are:

754-2554	2000	CYBER	201A Type data set
754-2531	2000	FEP-B	101A Type data set

SOFTWARE SUPPORT

The following tables indicate how much support (maintenance, documentation, consulting, and refunds) to expect from the Center if you use a particular piece of software. NOTE: An X in front of the name indicates an experimental version.

	Maintenance	Documentation	Consultation	Refunds
FULL	1. New version installed as soon as possible. 2. Bugs fixed by staff or reported to vendor. 3. Vendor committed to fixing bugs.	Full documentation from vendor or source.	Consultants familiar with use and problems.	Refunds given for malfunctions.
PARTIAL	1. New versions installed as staff is available. 2. Known errors may exist. 3. Vendor or source may not be committed to fixing bugs.	Documentation from vendor or source may be inaccurate or incomplete.	Consultants have information on access; additional information depends on available staff.	Refunds given for undocumented deficiencies.
MINIMAL	1. New versions installed if no major mods required. 2. Known errors may remain 3. No guarantee of support from vendor or source.	Local documentation only on how to access; any available documentation may be inaccurate or incomplete.	Consultants have information on access only	None
OBSOLETE	No maintenance	No new documentation	Consulting help may not be available	None

	Maintenance	Documentation	Consultation	Refunds
EXPERIMENTAL	1. New versions may be installed with little or no warning. 2. Bugs noted, fixed, or reported, as appropriate. 3. No permanent support level classification.	Documentation may by incomplete or inaccurate.	Consulting help may not be available.	Refunds given for malfunctions.

CDC CYBER SOFTWARE

Software Name	Support Level	Source	Documentation Available From:
NOS Operating System	Full	CDC	Computer Center or OSU Bookstore
FTN compiler	Full	CDC	Computer Center or OSU Bookstore
APL interpreter	Full	CDC	Computer Center
ALGOL compiler	Full	CDC	" "
COBOL compiler	Full	CDC	" "
SORTMRG-sort package	Full	CDC	" "
BASIC interpreter	Full	CDC	Computer Center
EDIT-text editor	Full	CDC	" "
SCRIBE-text editor	Partial	Tektronix	Computer Center
PASCAL compiler	Partial	ETH-ZURICH	OSU Bookstore
SNOBOL4 interpreter	Minimal	U.Colorado	On-line
GPSS-simulation package	Full	CDC	Computer Center
COMPLOT	Full	Computer Center	Computer Center
PLOT10	Partial	Tektronix	Computer Center
OSULIB	Full	Computer Center	" "
SPSS	Full	Northwestern University	" "
XSPSS	Experimental	Northwestern University Version 7.0	

CDC CYBER SOFTWARE

Software Name	Support Level	Source	Documentation Available From:
BMD	Partial	MCAUTØ	Computer Center
BMDP	Partial	MCAUTØ	" "
IMSL	Full	IMSL,Inc.	" "
ARAND	Full	Computer Center	Computer Center
GASPIV	Partial	Purdue	Computer Center
MPOS	Partial	Northwestern University	" "
DYNAMO	Partial	Northeastern University	Computer Center
OPTIMAL	Partial	Computer Center	Computer Center
LISP	Partial	U. of Texas	" "
GRAFIT	Full	Computer Center	Computer Center
ECAP	Obsolete	CDC	Not Available
SPICE	Partial	U of Cal Berkeley	" "
MIMIC	Obsolete	CDC	" "
METRO/APEX	Partial	Comex	Computer Center
SIMSCRIPT	Partial	CACI, Inc.	Computer Center
MINITAB	Partial	Penn State University	Computer Center
FLECS	Partial	U. of Oregon	Computer Center
LPLTLIB	Full	Computer Center	Computer Center
ARAND	Partial	Computer Center	Computer Center
TIDY	Full	CDC	Computer Center

CDC 3300 SOFTWARE

Software Name	Support Level	Source	Documentation Available From:
OS - 3 Operating System	Partial	Computer Center	Computer Center
FORTRAN compiler	Partial	"	"
COBOL compiler	Minimal	"	Computer Center
ALGOL compiler	Minimal	"	"
BASIC interpreter	Minimal	Computer Center	Computer Center
OSCAR	Minimal	"	"
ASSEM	Minimal	"	"
COMPASS	Minimal	"	"
COPY	Partial	"	"
COSY	Partial	Computer Center	Computer Center
DIRECTORY	Partial	Computer Center	Computer Center
EDIT	Partial	"	"
LOAD	Partial	"	"
RADAR	Minimal	"	"
SORT	Partial	"	"
MERGE	Partial	Computer Center	Computer Center
EDITX	Partial	"	Computer Center
SIPS	Partial	"	"
SSP	Obsolete	IBM	Not Available
GASPIV	Obsolete	Purdue U.	Computer Center
DYNAMO	Obsolete	Northeastern University	"
ARAND	Minimal	Computer Center	Computer Center
OPTIMAL	Partial	"	"
COMPLOT	Partial	"	Computer Center
CALTEK	Obsolete		"
GRAFIT	Full	Computer Center	"
SURF	Minimal	"	"
$GAMES	Partial	"	Not Available
GROPE	Obsolete	"	"
LIBEDIT	Partial	"	"
$UBACKUP	Partial	"	"
$LIBRARY	Full	"	"
$REKOVER	Full	"	"
*LPPLOT	Full	Computer	Not Available

INSTRUCTIONAL COMPUTING NEWS

In association with CONDUIT (an NSF-funded project concerned with the transportation of validated computer-based instructional materials), Dr. George H. Culp, University of Texas, is exploring the feasibility of translating into BASIC those lesson materials written in a variety of computer-assisted instruction (CAI) languages. If the lessons can be written in BASIC with no loss of substantive content or pedagogical strategy, they may be transported more easily.

To date, several programs have been successfully translated to BASIC. In many cases, the BASIC version required fewer program statements, without altering the program's content or strategy.

As part of the study, Dr. Culp would like to solicit comments and opinions from readers of Access -- Should CAI materials be written in BASIC?

Send your responses to Dr. Culp at COM 1, The University of Texas at Austin, Austin, TX 78712, (512) 471-7202.

SPSS VERSION 7.0

SPSS Version 7.0 is now available for use on the CYBER. The new version is incompatible with 6.5 in several important respects; these differences are described in the "SPSS User Supplement" available from the Computer Center Business Office in MCC 142.

From now until February 15, 1978, SPSS 7.0 can be accessed and executed as follows:

```
ATTACH,XSPSS/UN=LIBRARY.
XSPSS.
```

On February 15th, version 7.0 will become SPSS and version 6.5 will be XSPSS until July 1, 1978.

PROJECTED SOFTWARE REQUIREMENTS FOR COMPUTER CENTER USERS

The Software Evaluation Committee is attempting to ascertain the need for some software items: specifically, a Data Base Management System (DBMS), PL/1, and Cross-Assemblers.

DBMS. Is defined as a software system that is intended to manage and maintain data in a efficient structure for processing by user programs. A DBMS organizes data elements in a predefined structure and retains relationships among different data elements in the data base.

PL/1. Control Data has announced a PL/1 compiler for the CYBER computer. The compiler operates under the NOS operating system and would be available to both batch and terminal users.

Cross-Assemblers. The increased number and applications of mini and microcomputers is generating a greater interest in the use of sophisticated software development tools to improve the productivity and reliability of these systems.

Please answer the attached questionnarie as soon as possible and return to Bill Hunteman at the Computer Center.

QUESTIONNAIRE ON PROJECTED SOFTWARE NEEDS

		Yes	No
1.	Do you currently have a need for a DBMS?	☐	☐
2.	Do you anticipate having a DBMS application in the near future?	☐	☐
3.	If you have or anticipate a DBMS need, may be contact someone in your department for additional information?	☐	☐
	Please contact:_____ Phone:_____		
4.	Have you or members of your department had any experience with DBMS? If yes,	☐	☐
	DBMS:_____		
	Contact:_____ Phone:_____		
5.	Do you have any interest in using a PL/1 compiler on the CYBER?	☐	☐
6.	Estimate, if possible, probable usage of a PL/1 compiler in a calendar year. _____		
7.	Does your department currently have mini or micro-computers?	☐	☐
	Number of your system:_____		
8.	Would a cross-assembler and debugging tools for your mini or micro, supported by the Computer Center, facilitate your usage of your system?	☐	☐
	Please contact:_____ Phone:_____		

RETURN QUESTIONNAIRE TO:

Bill Hunteman
Milne Computer Center
Oregon State University
Corvallis, Oregon 97331

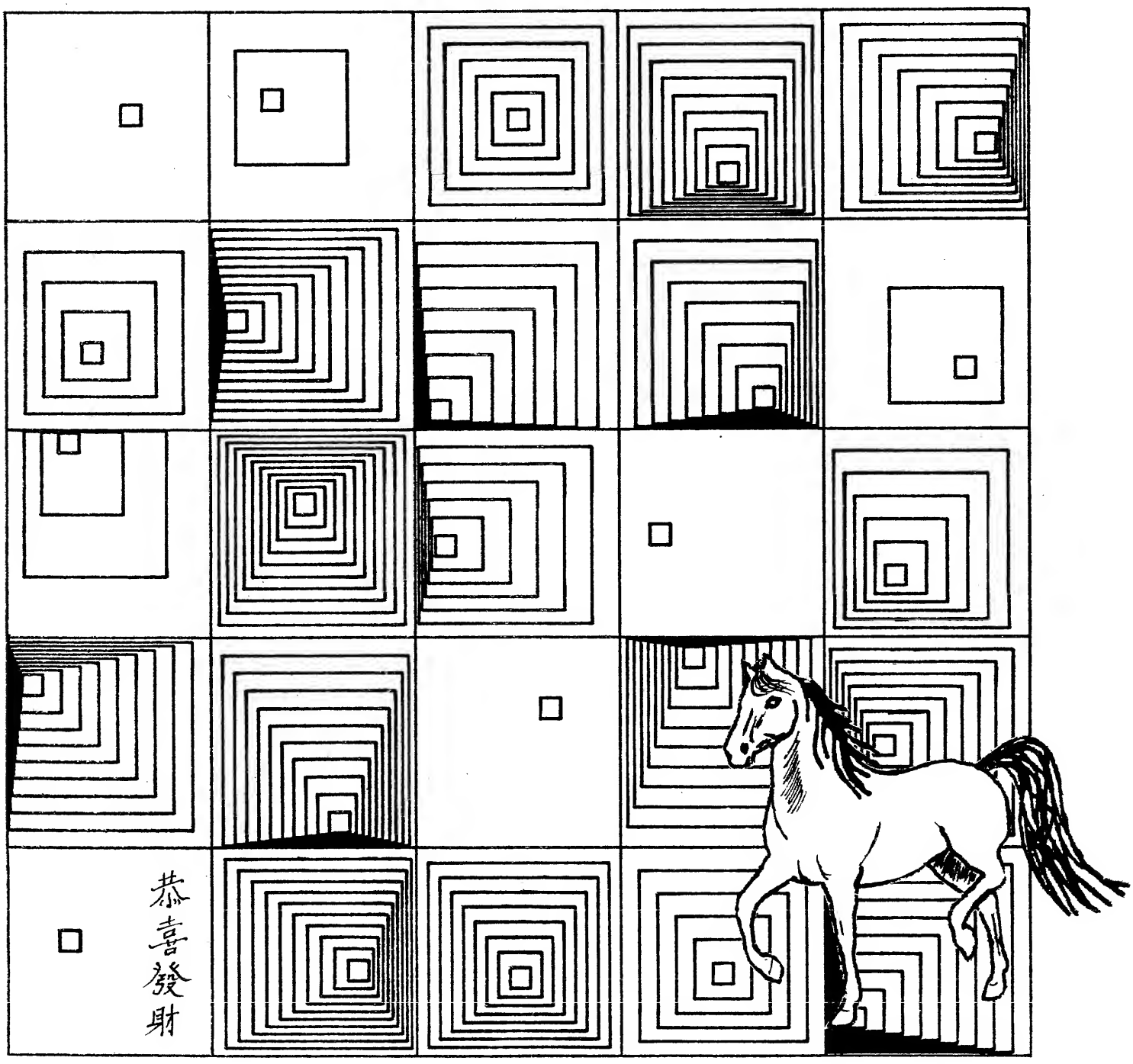
Oregon State University
Milne Computer Center
Corvallis, Oregon 97331

Non-Profit Org.
U.S. Postage
PAID
Permit No. 200
Corvallis, OR 97331

ACCESS

NEWSLETTER OF THE OREGON STATE UNIVERSITY MILNE COMPUTER CENTER

Vol. XIII, No. 2, Mar./Apr., 1978



MILNE COMPUTER CENTER

OREGON STATE UNIVERSITY

MANAGEMENT:

Director--Thomas L. Yates
Assistant Director--Christopher C. Calligan
Manager Data Processing Systems--Anthony J. White
Manager Operations and Programming Services--Ronald A. Davis
Manager Communications and Hardware--James W. Fryklund
Manager Educational Computing Services--JoAnn Baughman
Manager Systems Software--William J. Hunteman
Business Manager--Michael McQueen

OFFICE SERVICES

General Information	754-2494
Job Numbers--Gayle Zandofsky	754-3483
Billing (Accounts Receivable)--Hilary Detering	754-4183
Purchasing (Accounts Payable)--Dolores Gugel	754-2638
Manuals for sale--Hilary Detering	754-4183
Newsletter--Jody Bowles	754-2494
Instructional Computing Requests--Dorrie Lemon	754-2494
Unsponsored Research Grants--Dorrie Lemon	754-2494
Editorial Consultant--Ellen T. Drake	754-2494

PRODUCTION SERVICES

Card Sorting, Interpreting, etc	754-3584
Digitizing--RJay Murray	754-4156
Input/Output Area	754-3584
Computer Supervisor--Dan Berg	
Day Supervisor--Dale Hannon	
Night Supervisor--Clyde Webb	
Keypunching and Verifying--Verna Wohlers	754-2494
Magnetic Tape Librarian--Cindy Fancher	754-3584
Optical Scanning--George Beekman	754-2494
Purged Files--I/O Room	754-3584
Terminal Connection	754-2033
Testing Services--George Beekman	754-2494
Time-Sharing Services	
CYBER 73 300 Baud	754-3781
CYBER 73 110 Baud	754-3761
3300 300 Baud	754-3651, 754-3536
3300 110 Baud	754-4111

PROGRAMMING QUESTIONS--refer to CONSULTANT, Room 150 754-3474

HARDWARE SERVICES

Teletype--Doug West, Gary Jarman	754-2455, 754-2494
Electronic Terminals--Randy Grainger	754-2494
Statewide Network--Dennis Johanson	754-2494

Access

NEWSLETTER OF THE OREGON STATE UNIVERSITY MILNE COMPUTER CENTER

Ellen T. Drake, editor

Volume XIII, Number 2 March/April, 1978

In this issue:

Information in this newsletter is current as of March 1, 1978

EDITOR'S CORNER

You may be wondering why we have a horse on our cover this issue. There are many reasons; the main ones are: (1) This is the year of the Horse on the Chinese calendar; Chinese New Year's Day was the 7th of February, so Happy New Year again, everyone! The characters say Gung Shi Fa Tsai, which means here's wishing you happiness and prosperity. (2) The John Day River valley of Oregon is one of the best localities for finding Tertiary mammal bones and teeth and the horse is featured in those strata in an evolutionary progression from the small five-toed species to the modern one-toed animal. (3) JoAnn Baughman of the Computer Center is a horse fancier and has pretty pictures of horses one of which was digitized on a Tektronix 4956 Graphic Tablet which is part of the 4051 system and it was plotted on the Tektronix 4662 interactive digitizing plotter.

Readers of Access are encouraged to submit copy or ideas for future covers!

USER'S FORUM

We have recently received a letter from Jack Corliss, School of Oceanography. His constructive criticism as well as positive statements are the kind of feedback we in the Computer Center appreciate receiving. Jack said that he considers the consulting services he has received outstanding; he stated, "The consultants have always been available when I needed them; they know the system very well and are pleasant to work with. This is a contrast to my experience here years ago, and also contrasts with my past experience at other computer centers." His suggestions for better documentation are also welcome; he wrote, "The problem, which I have seen for 12 years in several computer centers, seems to be that the best programmers aren't the best documenters, i.e., they can't necessarily write clear, concise descriptions for the user, especially in a format that is consistent with the other documentation of the system.

"I have always thought that there must be individuals who were skilled at documentation, and were programmers who could communicate with other programmers, who could be given the responsibility to maintain documentation, and I would like to suggest this to you. The possibilities for extensive stored documentation accessible at a terminal also seem to me like an area of computer science which a University Computer Center should explore. The barrier to broader use of computers in society is at the interface between user and system, i.e., how do I get it to do what I want? The future solution may well be in self-teaching documentation systems coordinated with printed documentation in manuals."

For the information of all our users, the Computer Center Publications Committee has been hard at work for many weeks in trying to formulate a better system of documentation for users. We will announce our plans in the very near future. Thanks for writing, Jack!

CYBER COMPLOT NEWS

Gerber Plotting Queue

CYBER users, by means of the ROUTE control statement, can now send plots to the Gerber plotters without the inconvenience and expense of writing the plots on a magnetic tape. Two new disposition codes and five new forms codes have been defined for use with this statement as shown below:

Disposition Code	Description
GL	Gerber 1022 plotter ("little" Gerber)
GB	Gerber 2032 plotter ("big" Gerber)

Forms Code	Description
none	Black ballpoint pen
G4	0.4 mm wet ink pen
G6	0.6 mm wet ink pen
G1	1.0 mm wet ink pen
GS	Standard five-pen setup (Big Gerber only)
GX	Other pen requests

Below is an example of the appropriate use of the ROUTE statement for a plot which resides on local file TAPE10 and is to be plotted on the little Gerber plotter with 0.4 mm wet ink pen:

```
ROUTE,TAPE10,DC=GL,FC=G4.
```

Users who submit their jobs through a Remote Job Entry (RJE) terminal should also specify central site routing (TID=C).

Plots routed as described above will accumulate in the output queue from which they will be periodically dumped to magnetic tape by the operator. Plots with similar pen setups can then be grouped together for improved efficiency. Information provided with the TITLE control card should continue to include pen requests until greater experience and confidence have been gained with this new system.

Library Changes

Shortly after the publication of this issue of Access, the subroutines DOUBLE, NORMAL, and ITALICS will be deleted from the CYBER COMPLOT library. These subroutines only function on the Model 4002 Tekterminal which is obsolete and has not been manufactured by Tektronix for several years. Their

removal will allow a reduction in COMPLOT overhead for programs that do not call the subroutines, and, as indicated by the Computer Graphics Enhancement Survey distributed last November, the use of the subroutines is minimal. We anticipate that the italics capability will be included in an enhanced symbol-producing subroutine now under development.

Also taking place during the next few months will be the addition of a three-dimensional plotting capability to CYBER COMPLOT. To avoid future confusion and ambiguity in subroutine names, subroutine SCALE1 (not to be confused with SCALE) will have its name changed to RANGE. The subroutine will exist in the library under both names until about May 1, after which SCALE1 will be deleted.

A new version of the CYBER COMPLOT Manual reflecting these and other changes will be published during Spring Term.

RATE STUDY

The Center Rate Study Committee chaired by Tony White is preparing its recommendations for the 1978-79 rate structure. The annual review of the rate schedule is intended to put the Center's individual services on a cost-recovery basis.

The committee's recommendations will be reviewed by the Academic Users Council and the Computer Committee. The final rates will be published in the Staff Newsletter prior to submission to the University Business Office.

Users who wish to provide information for the committee's consideration should contact Tony White, Tom Yates or a member of the advisory groups.

UNSPONSORED RESEARCH

Competition for funds to do computing for unsponsored research projects has become very keen. With the academic year less than half over at the end of December, sixty percent of the limited budget established for this purpose had already been expended. It is obvious that many deserving projects can not be supported as a result of the necessarily high degree of selectivity used by the allocating committee.

Major professors are urged to check alternative sources of funds for graduate student thesis projects before applying for this support. Applicants are reminded that all requests must include a cost estimate prepared by a competent consultant, preferably from the Computer Center Staff.

SYMAP - The Map Maker

The Computer Center announces the availability of a new computer mapping program called SYMAP which uses a standard line printer as its output device. The program is very useful to geographers, planners, geologists, meteorologists and others who have interest in mapping and analyzing spatial data; it has been found especially useful for interpolation between data points and trend surface analysis. SYMAP is acronym for Synagraphic Mapping system and its first syllable is pronounced as in the word symbol.

SYMAP can be used by a person unfamiliar with computer programming; at the same time, its flexibility enables the more experienced users to tailor it to their specific needs. In fact, by using a special subroutine called FLEXIN, users may integrate highly sophisticated models.

The Laboratory for Computer Graphics and Spatial Analysis at Harvard University, which first developed the SYMAP program under the direction of Howard T. Fisher, has published a new reference manual for SYMAP users. This manual can be purchased for $10 by writing to the Laboratory for Computer Graphics and Spatial Analysis, Graduate School of Design, Harvard University, 520 Gund Hall, 48 Quincy Street, Cambridge, Massachusetts 02138.

If you wish to use SYMAP or have further information about this program, contact the consultants in Room 150, ext. 3474. — E.T.D.

PROTECT YOURSELF, CHANGE YOUR SECURITY CODES

THE FUTURE OF 3300?

We experienced 26 1/2 hours in January of downtime on the CDC-3300 computer. A variety of components were involved in the breakdowns, but the 814 mass-storage disk alone caused a down period of 10 1/2 hours. Because of the age of the machine the possibility of similar troubles increasing in the future is apparent. These statistics point to the necessity of planning for replacement of the 3300.

IMSL UPDATE

IMSL has recently been updated. Old subroutines having serious errors were:

FTCOMP	NRWRST
FTMAXL	OFROTA
MGAMMA	RLONE
MMBSYN	SSSBLK
NMKEN	SSSCAN

Manual updates are available in MCC 140.

ATTENTION

Professors and students are reminded that user manuals assigned for classes must be purchased by students from the OSU Bookstore, not at the Computer Center.

INSTRUCTIONAL COMPUTING NEWS

At Oregon State University the computer is used each term in 250 courses by 9400 students. The major portion (61%) of this use is for problem solving; the students use the computer as a tool to solve problems related to their course work. Fifteen per cent of the instructional time is used in teaching the students how to program a computer. Class demostrations or other activities account for the remaining 24% of instructional usage.

If you use the computer in teaching a course, we are interested in learning about your experiences; for example, we would appreciate knowing about any interesting applications you may have developed which enhance your teaching and which might help others in their courses. Please write us a note or call JoAnn Baughman or Ted Hopkins at ext. 2494.

* * * * * *

The following is reprinted from the Computation Newsletter, University of Texas, Austin, Vol. X, No. 7.

* * * * * *

Some useful information on instructional computing at the collegiate level is presented in Charles Mosmann's *Evaluating Instructional Computing* (University of California, Irving, 1976). Mosmann discusses ten subjects, including "The Need for Standards", Instructional Effectiveness" and "Measuring Quality". He also reaches some interesting conclusions. For example, in a chapter entitled "What Students Do", he concludes that:

(1) Most student computing is done in order to learn about computers; most other use is for problem solving. Although highly visible on some campuses and in the literature, tutorial and other conversational techniques of instructional computing are not widely used in higher education.

(2) Where computing is of high quality, where it is readily available, and where its use is encouraged, nearly all students (and faculty) will make at least some use of the computer.

(3) The value of student use is not necessarily in direct proportion to the amount used or the cost: most student users spend little time and money using the computer, but this use is very important to their total educational experience.

* * * * * *

The results of a National Science Foundation study on the use of computers in secondary education are summarized in the current issue of *Creative Computing* (Vol. 12:5, p. 51). The study sample consisted of 25% of the school districts in the U.S., of which 65% responded. Based on the response, some of the major conclusions of the study are:

(1) Over 58% of the schools use a computer for administrative or instructional purposes.

(2) It is projected that within the next decade every secondary school will have access to a computer system for administrative or instructional applications.

(3) The most frequent use of instructional computing is as a "problem-solving tool".

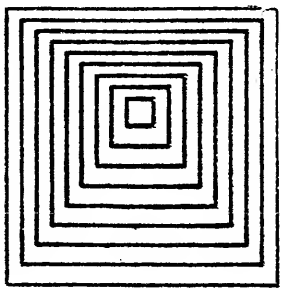
(4) Almost 14% of the schools use computer-assisted instruction (CAI) applications.

(5) BASIC is the predominant computer language for instructional computing.

COURSE REACTION SURVEY

Forty-one schools and/or departments used the new short-form Course Reaction Survey fall quarter to evaluate 1,354 classes. The forms consist of a porta-punch IBM card with up to 12 questions and an open-response form on which students may write comments about the course or the instructor. The Computer Center received and processed a total of 37,867 cards. This service is available to schools and departments at OSU without charge.

Requests for survey cards, open-response forms, and preparation of header cards should be submitted to the Computer Center two weeks prior to the desired date of processing. Forms and additional information are available at the Center, Room 227, or by telephone request to Cindy Fancher, ext. 4381.



NEW CYBER FORMS CODE

A new forms code has been added for use in the CYBER ROUTE statement.

When the new code is used the operator will place a new ribbon in the line printer and reverse the regular 11 x 14 paper before printing the file. For information on how to use this code, contact Dan Berg x2494.

NEW CONSULTING PROCEDURE

Users of the Computer Center Consulting Service will now be asked to show their charge numbers. There are several reasons for this new procedure: it will make it easier for the Computer Center to determine which user groups are using the Consulting Service; it will help us identify what types of questions are most frequently asked so that we have a basis for improving documentation, workshops, and other educational services; and in the case of student job numbers, it will allow us to determine whether the student's instructor has given us the authority to help the student with the problem.

The charge number will NOT be used to bill you for consulting; there is still no charge for limited (five minutes or less) consulting help.

The consultants appreciate your cooperation.

SPSS Version 7.0

SPSS and SPSS-ONLINE have been updated to Version 7.0. SPSS 7.0 can now be accessed and executed as follows:

```
ATTACH,SPSS/UN=LIBRARY.
SPSS.
```

Version 6.5 is available as XSPSS until July 1, 1978.

OPERATING STATISTICS

	Dec 76	Dec 77
Batch Logons 3300	7264	5914
Batch Logons CYBER	13981	16062
Terminal Logons 3300	27322	15140
Terminal Logons CYBER	11427	10579

	Jan 77	Jan 78
Batch Logons 3300	9892	10284
Batch Logons CYBER	10149	12842
Terminal Logons 3300	22126	17041
Terminal Logons CYBER	9345	11220

REPORTING CYBER PROBLEMS

Users who wish to report problems they have encountered when using the CYBER may do so by completing a CYBER System Report form and turning it into the Input/Output desk in the Computer Center. The Input/Output desk has a supply of the forms for your use.

The CYBER System Report form can also be used to request changes to any CYBER software package supported by the Computer Center.

If you provide a complete address when reporting a problem or requesting a change, a copy of our reponse to your report will be sent to you.

TEST SCORING SERVICES

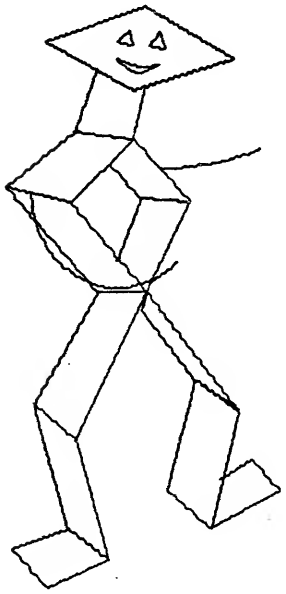
The O.S.U. Computer Center offers two completely independent methods for instructors to have their exams machine scored: operation of the Datronix Scoring Machine, and use of the Test-Scoring Service.

1) The Datronix Scoring Machine. This machine is available for use by instructors between 8:00 a.m and 5:00 p.m. in Room 201 of the Computer Center. It can mechanically score tests using special multiple choice answer forms, printing the total number of right answers on the edge of each form and marking each wrong answer. The Datronix Scoring Machine is not connected to any computer; therefore, no class list or item analysis, or other printouts can be produced for exams scored in this way. Computer Center personnel are not available to operate the machine, but whenever possible they will be glad to assist instructors unfamiliar with it. Use of the Datronix Scoring Machine is free, but there is a charge for the special answer forms. The Computer Center does <u>not</u> furnish these forms; they may be ordered directly from the Business Equipment Center in Eugene, (telephone, 485-6606). Although we will try to help when we can, the Computer Center can assume no responsibility for problems arising due to the use of the Datronix Scoring Machine.

2) The OSU Computer Center Test Scoring Service is a service available to instructors who wish to have their multiple-choice exams scored by computer. A variety of printouts are available, including several types of class listings, individual student printouts, and an item analysis for assessing the statistical validity of the test.

The service allows instructors a great deal of flexibility in assigning point values, dividing the test into parts, and determining which listings are printed. There is a small charge for this service based on class size, types of printouts requested, and speed of service desired.

The special answer sheets used for exams scored by the Test Scoring Service are sold by the Computer Center through the I/O desk (Room 207). An additional easy-to-read booklet describing the Test Scoring Service in more detail may be obtained free of charge by stopping by Room 142 of the Computer Center, or by calling x2494 (ask for Instructor's Handbook, CCM77-02).



TURN THE PAGE
FOR ANNOUNCEMENT OF
SPRING TERM SHORTCOURSES
AND REGISTRATION FORM,

REGISTER EARLY!!!

COMPUTER CENTER SPRING TERM SHORTCOURSES

The Computer Center will offer a Spring series of shortcourses. The sessions will begin April 4 and will be ordered so that information required in the later sessions is presented in earlier sessions.

There is no fee but advanced registration is required. On page 13 of this issue is a registration blank. Additional registration forms are available in the Computer Center Main Office, room 217.

All classes will be held from 3:30 to 5 PM on the dates listed. The Center will furnish job numbers for the applicants when required for the training session.

Applicants will need to purchase the necessary manuals for the course.

If you have any questions, call Courtenay Abell at x2494 or Jo Ann Baughman at x2161.

Schedule of Shortcourses

The shortcourses will be held in room 223 of the Computer Center.

April 4, 6 - Introduction to NOS (beginning level) (3 hours)
Languages and systems available - Batch processing - Control card formats.

April 10, 11 - NOS Edit (intermediate) (3 hours)
Interactive computing under NOS.

April 12 - NOS FORTRAN (1-1/2 hours)
Describes the use of FORTRAN on NOS. Previous knowledge of FORTRAN required. Prerequisite: Introduction to NOS or equivalent knowledge.

April 13, 17 - NOS File Structure (3 hours)
Discussion of the File Structure and use of Record Manager. Previous knowledge of FORTRAN required.

April 18 - NOS Submit & Procedure Files (1-1/2 hours)
Discussion of control card branching and looping, etc. Prerequisite: Introduction to NOS or equivalent knowledge.

April 19 - NOS Libraries (1-1/2 hours)
LIBGEN and LIBEDIT. Prerequisite: Introduction to NOS or equivalent knowledge.

April 20 - NOS Loader (1-1/2 hours)
Loader control cards and control card sequences. Relocatable vs. absolute binary modules. FORTRAN overlays. Load maps. Prerequisite: NOS FORTRAN or equivalent knowledge.

April 24, 25 - NOS Magnetic Tapes (3 hours)
Basic description of available formats. Blocking and unblocking of tapes. FORM utility. Transportability considerations. Prerequisite: NOS FORTRAN or equivalent knowledge.

April 26 - NOS Graphics (1-1/2 hours)
Instruction in the use of CYBER COMPLOT and canned plot programs. COMPLOT is a set of subroutines intended to provide a basis for easily programming graphics applications. Prerequisite: A working knowledge of NOS.

April 27 - NOS Hints (1-1/2 hours)
How to get the most for your computing dollar.

Continued on next page

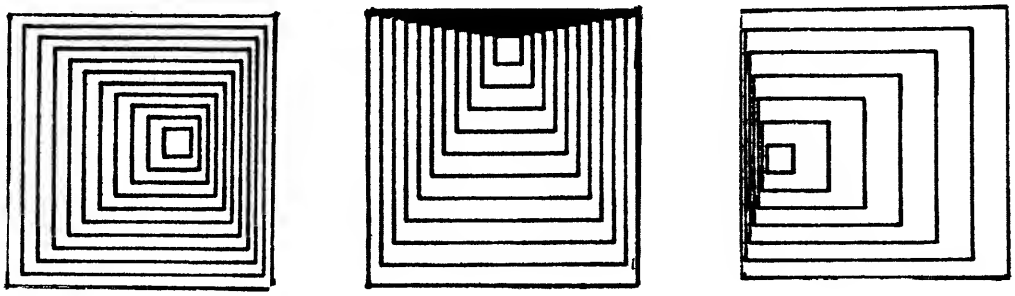
May 1 - NOS Questions (1-1/2 hours)
An opportunity for participants to ask further questions.

May 2 - Cyber Application Packages (1-1/2 hours)
Discussion of the use of IMSL, which performs the analysis of experimental design data, basic statistics, differential equations, Eigenvalues, econometrics, linear equation, interpolation and smoothing. Also GPSS, GASP, and Simscript.

May 3, 4 - Introduction to SPSS (3 hours)
The Statistical Package for the Social Sciences is a self-contained problem orientated language for the analysis of statistical samples. The control cards for using SPSS, local differences and various kinds of analysis available through SPSS will be discussed.

May 8, 10 - Data Base Systems (3 hours)
A discussion of two Data Base Systems available on the Cyber. SIR-The Scientific Information Retrieval system was designed for the needs of the researcher. SIR will interface directly with major statistical systems such as SPSS and BMDP. FAMULUS is a personnel documentation system. It provides individual freedom to the researcher to structure and update information files.

May 9, 11 - SIPS on the Cyber (3 hours)
This course will include 3 hours of instruction in the use of SIPS on the Cyber.



REGISTRATION FORM

1978

COMPUTER CENTER

SPRING TERM SHORTCOURSES

Please check the courses that you wish to attend. There are no charges or registration fees, but participants will need to purchase the necessary manuals for the courses.

All courses will be held in the Computer Center Conference Room, #223, beginning at 3:30 PM on the dates indicated.

____	1. Introduction to NOS (sequence)	April 4, 6
____	2. NOS Edit (sequence)	April 10, 11
____	3. NOS FORTRAN	April 12
____	4. NOS File Structure (sequence)	April 13, 17
____	5. NOS Submit & Procedure Files	April 18
____	6. NOS Libraries	April 19
____	7. NOS Loader	April 20
____	8. NOS Magnetic Tapes (sequence)	April 24, 25
____	9. NOS Graphics	April 26
____	10. NOS Hints	April 27
____	11. NOS Questions	May 1
____	12. Cyber Application Packages	May 2
____	13. Introduction to SPSS (sequence)	May 3, 4
____	14. Data Base Systems (sequence)	May 8, 10
____	15. SIPS on the Cyber (sequence)	May 9, 11

Name:_____

Department:_____ Phone:_____

Return completed form to: Courtenay Abell
Computer Center
Oregon State University
Corvallis, OR 97331

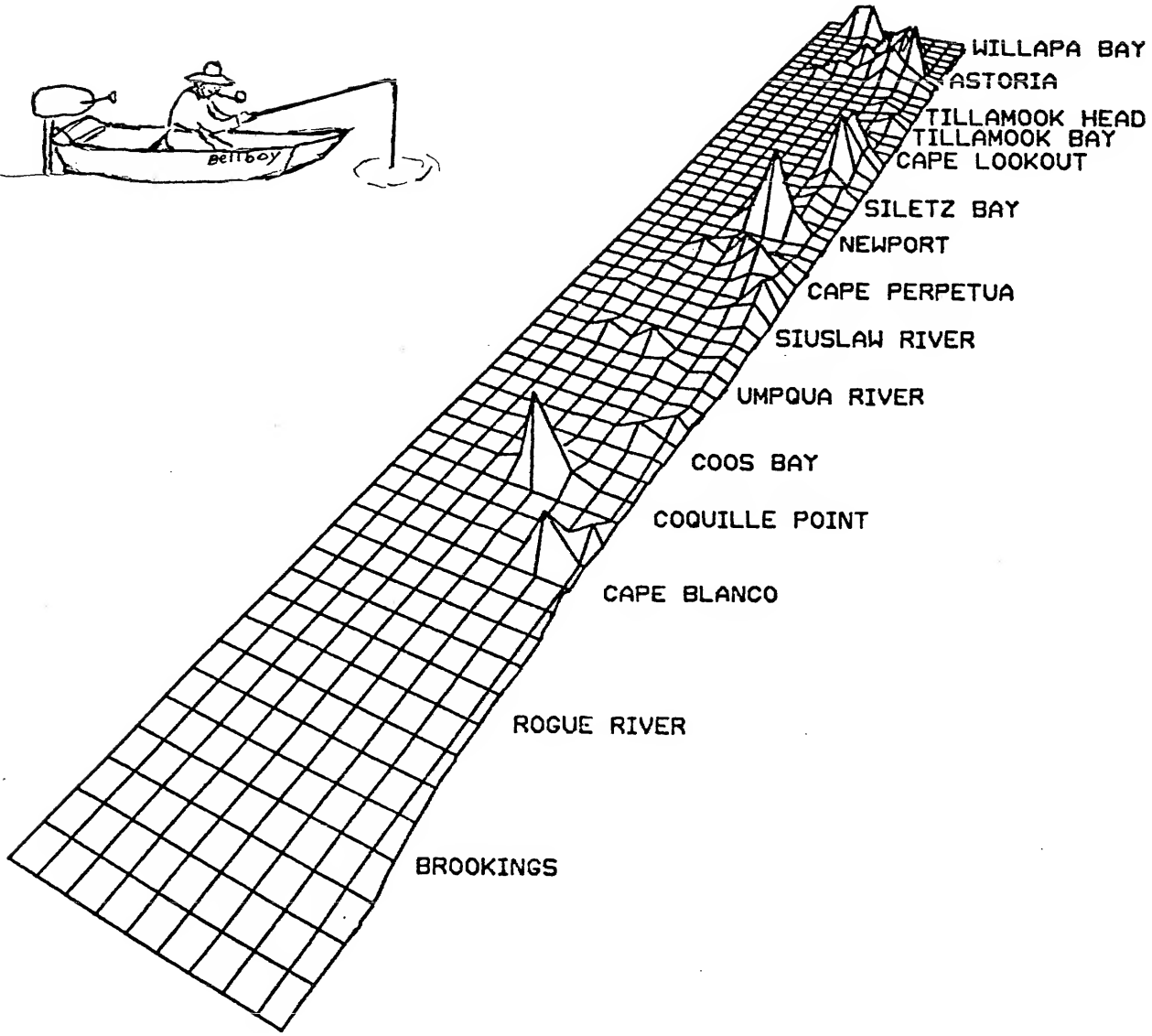
Oregon State University
Milne Computer Center
Corvallis, Oregon 97331

Non-Profit Org.
U.S. Postage
PAID
Permit No. 200
Corvallis, OR 97331

ACCESS

Newsletter of the Oregon State University Milne Computer Center

Vol. XIII, No. 3, May/June, 1978



MILNE COMPUTER CENTER

OREGON STATE UNIVERSITY

MANAGEMENT:

Director--Thomas L. Yates
Assistant Director--Christopher C. Calligan
Manager Data Processing Systems--Anthony J. White
Manager Operations and Programming Services--Ronald A. Davis
Manager Communications and Hardware--James W. Fryklund
Manager Educational Computing Services--JoAnn Baughman
Manager Systems Software--William J. Hunteman
Business Manager--Michael McQueen

OFFICE SERVICES

General Information	754-2494
Job Numbers--Gayle Zandofsky	754-3483
Billing (Accounts Receivable)--Hilary Swingle	754-4183
Purchasing (Accounts Payable)--Dolores Gugel	754-2638
Manuals for sale--Hilary Swingle	754-4183
Newsletter--Jody Bowles	754-2494
Instructional Computing Requests--Dorrie Lemon	754-2494
Unsponsored Research Grants--Dorrie Lemon	754-2494
Editorial Consultant--Ellen T. Drake	754-2494

PRODUCTION SERVICES

Card Sorting, Interpreting, etc	754-3584
Digitizing--RJay Murray	754-4156
Input/Output Area	754-3584
Computer Supervisor--Dan Berg	
Day Supervisor--Dale Hannon	
Night Supervisor--Clyde Webb	
Keypunching and Verifying--Verna Wohlers	754-2494
Magnetic Tape Librarian--Cindy Fancher	754-3584
Optical Scanning--George Beekman	754-2494
Purged Files--I/O Room	754-3584
Terminal Connection	754-2033
Testing Services--George Beekman	754-2494

Dial-Up Time-Sharing Services

110 (Type 103) (3 lines) (5 lines)	754-3761	754-4111
300 (Type 103) (10 lines)(4 lines)	754-3781	754-3536
1200 (Type 202S) (2 lines)		754-2521
1200 (Type 212) (2 lines)		754-3122

PROGRAMMING QUESTIONS--refer to CONSULTANT, Room 150 754-3474

HARDWARE SERVICES

Teletype--Doug West, Gary Jarman	754-2455,	754-2494
Electronic Terminals--Randy Grainger, Dean La Voie		754-2494
Statewide Network--Dennis Johanson		754-2494

Access

NEWSLETTER OF THE OREGON STATE UNIVERSITY MILNE COMPUTER CENTER

Ellen T. Drake, editor

Volume XIII, Number 3 May/June, 1978

In this issue:

Information in this newsletter is current as of May 1, 1978

EDITOR'S CORNER

The Computer Center Hardware Division has launched a new column in Access called "Short Circuits" in which news of changes in hardware, data lines, and other services available to users will be announced. "Short Circuits", like our Users Forum and XREF, will be a now-and-then feature depending on the news available. Bob Griffin and Gary Jarman wrote our first Short Circuits; read "Once Upon a Dial-Up" and "Contemplating Buying a Terminal?"

Cover: Mike Drost and Al Tyler provided the copy for the cover of this issue. The masthead was drawn by the CYBER Complot using new features that are now available to users (see article by Mike Drost entitled "New CYBER Complot Version Released"). The plot shows the distribution of catches of Petrale Sole on the continental shelf off Oregon for 1975. Cross points on grid represent centers of 5-mile square summary blocks. Maximum peak represents 59,990 pounds. Data are from fishermen's logbooks. The work is from the Pleuronectid Project (research of A.V. Tyler, Dept. of Fisheries and Wildlife) funded by the Sea Grant College Program.

The human touch is by E.T.D.

HOLIDAY SCHEDULE

Memorial Day

The Computer Center will be closed Memorial Day, May 29, 1978.

Independence Day

The Computer Center will be closed Tuesday, July 4, 1978.

DIRECTOR'S COMMENT

During this past year the newsletter has taken on a new look and character, thanks to the fine work of Editor Ellen Drake. It has been interesting to me that over the years, prior to Ellen's editorship, we never heard how readers felt about the newsletter. Since last fall's change to the ACCESS format we've had many comments, mostly good and a few that are critical. But the key point is we now know the newsletter is being read. So keep the cards and letters coming—preferably addressed to Editor Drake.

T.L.Y.

CYBER PERMANENT FILES

The recent change in the CYBER disk units has required a change in the permanent file billing process. The permanent file cost per PRU will NOT be changed.

Effective June 1 permanent file owners will be billed for the number of full tracks required to hold a direct access file. A track on the new disk units contains 225 PRU's. For example, if you had a direct access file that contains 2 PRU's in the past the billing was 2 x $0.047; the new billing will be 225 x $0.047.

Direct access files (these are files created by DEFINE and used with ATTACH) are allocated space in full track quantities. Even though your file may use only a part of the track the entire track is assigned to you and cannot be used by any other user.

Billing for indirect access files (created with the SAVE statement) is not changed.

OS-3 SOFTWARE CUTBACK

Software support for the OS-3 is scheduled to be cut back next September when packages that have direct equivalents on the CYBER, or are obsolete, will be removed from the 3300. Packages scheduled for removal are ALGOL, CALTEK, COBOL, DYNAMO, GASPIV, OPTIMAL and SSP.

USER'S FORUM

Gil Bachelor submitted to us this information on LISTN and INDEX, two programs available on the CYBER. These programs are not Computer Center programs but Gil thought they might be helpful to other users.

LISTN will list your file and print line numbers at the left. Options include an initial page eject, and single-, double-, or triple-spaced listing.

The INDEX program reads a file and prints an alphabetized list of symbols in the file, with the numbers of the lines where each symbol occurred. A listing of a file with line numbers, together with an INDEX listing, provides a convenient way to locate all occurrences of a given symbol in a file. INDEX has options for handling COMPASS, FORTRAN, META, or XL/1 programs.

For details on the use of LISTN and INDEX, contact Gil Bachelor, Dept. of Computer Science ext. 3273.

Readers who have programs or hints and suggestions which may be helpful to other users are encouraged to submit them to this column c/o the editor.

MODEL 43 TELETYPE RIBBON BLUES

If you are the proud owner of a new model 43 Teletype terminal we have news of importance for you.

We have found that Teletype Corporation is the only vendor you can purchase the ribbons from right now and there may be delays in shipping. Your ribbon inventory should be planned so that you'll have about a 60-day back-up on hand.

Use this form:

TELETYPE CORPORATION TELETYPE®
Order for 43 Teleprinter Ribbon
(PLEASE PRINT USING BALL POINT PEN)

NAME

ADDRESS

COMPANY | PHONE

CITY

STATE | ZIP

(DO NOT DETACH THIS SHIPPING LABEL)

QUANTITY DESIRED

TP430035 CARTRIDGE(S) W/RIBBON
PRICE EACH $5.50*

ENCLOSE THIS CARD AND PAYMENT BY CHECK OR MONEY ORDER. (Use PEEL OFF LABEL Below.) CARTRIDGES W/RIBBON WILL BE SENT PROMPTLY.

TOTAL PRICE OF PARTS	
LOCAL SALES TAX	
POST. & HAND. 50¢ EA.	
TOTAL ENCLOSED	

ONLY ORDERS FROM STATES LISTED BELOW MUST INCLUDE STATE SALES TAX

ARIZONA	FLORIDA	MICHIGAN	OKLAHOMA
ARKANSAS	ILLINOIS	MINNESOTA	PENNSYLVANIA
CALIFORNIA	INDIANA	NEW JERSEY	RHODE ISLAND
COLORADO	IOWA	NEW YORK	TEXAS
CONNECTICUT	MARYLAND	N. CAROLINA	VIRGINIA
DIST. OF COL.	MASSACHUSETTS	OHIO	WISCONSIN

TELETYPE CORPORATION
5555 TOUHY AVENUE
SKOKIE, ILL.
60076

DEPT. 2181-3

SHORT CIRCUITS

ONCE UPON A DIAL-UP

Once upon a time (March, 1978) the Vizier decided to change the data rates of P.S.U.'s dial-ups. Where there were six 110 baud, three suddenly disappeared. In the kingdom of 300 baud the people were blessed by the arrival of two new lines with more to come.

All of the dial-up lines now have the exceptional ability to allow conversations with the friendly CDC 3300, the mysterious Honeywell 66/40, and the mighty CYBER 70/73. The caliphs hope that this new organization will lead all faithful followers of the Computer Center to a state of eternal happiness. To speed your travels, here is a directory to use in the Portland area.

110 Baud	300 Baud
229-3106	229-3101
3107	3102
3108	3116
	3117
	3121
	3122
	3123
	3124

(Four additional lines have been restricted for use only by the Health Sciences Center.)

Please drop us a bit, we'd love to hear from you.

CONTEMPLATING BUYING A TERMINAL?

Hard copy and CRT terminals have been reviewed and the following machines are suggested for future purchases and use with our time-sharing systems and other dedicated use. The Center has personnel trained to install and maintain these machines and will have an adequate stock of parts and supplies to support them. These terminals were selected for cost effectiveness and maintainability as well as versatility and ease of use.

Hardcopy (printing) terminals.
If off-line data entry and storage are required, the familiar Teletype Corporation model ASR33 teletype with self-contained paper-tape punch and reader will continue to be supported for some time. This is a 110 baud electro-mechanical keyboard-printer with good reliability and moderate cost of

operation. The current new price with friction-feed paper mechanism and pedestal is $1134. If paper tape facilities are not needed, and a minimum cost, low-speed keyboard-printer is required, the Teletype model KSR33 is still available as a desk-top unit for $810.

The recently announced Teletype model KSR43 has already achieved wide user acceptance and should be cost effective and very reliable. This terminal is a modern dot matrix printer with full ASCII character set and 132-character line length. The machine is quiet in operation and can print at a 30-character-per-second rate. A number of operator selectable features are also included in the standard price of $1170 for the EIA (RS232) version. When purchased under the State lease agreement, they may be available with an additional 15 percent discount.

CRT Terminals.
The State has recently established a price agreement with the Infoton Company of Burlington, Massachusetts. Several versions of a modern twelve-inch CRT are available, one of which is microprocessor based. The I200/1 is an easily used, general purpose machine suitable for most student, program-entry and file manipulation uses. The price is $795 and the I200/2 with numeric keypad is $820. For extensive file manipulation and transaction processing applications, the I400/4 with complete editing and user function keys is available for $1095.

The contracted prices are good through June 30, 1979. Departments interested in information about acquiring these terminals should call Ron Davis at ext. 2494. Arrangements can be made with the Computer Center to acquire this type of equipment.

Funds used to procure this equipment can be counted towards the capital outlay requirements in your budget. Contact Mike McQueen, ext. 2638, if you have any budgetary questions.

Terminal Maintenance.
The current charge for installations, modifications and maintenance is now $17 per hour, portal to portal, plus parts required. Scheduled preventive maintenance is $11 per hour. Departmental users may elect to have their model 33 Teletype placed on the public terminal list, and the Center will waive maintenance charges for that machine. Public status requires that the machine be available to any University student or staff member at any time between 8 a.m. to 5 p.m. weekdays on a first-come-first-served basis. [Note: maintenance charges are subject to change.]

Terminal Connection.
Several options are available to the remote user for connecting the terminal to Computer Center facilities. A dedicated or "hard-wired" hookup can be made by the Center creating a private and permanent connection. The line installation cost for 110 and 300 baud terminals is $200 and a monthly seven-dollar charge for line rental is made. For low speed EIA terminals an additional equipment charge of $167 is made. Terminals operating at 1200 baud will require a "full duplex" line costing $220 with a thirteen-dollar monthly line charge and an additional equipment charge of $444. Off campus Computer

Center users, or those utilizing other computing systems, may use 110 and 300 baud telephone "dial-up" facilities. An originate-only acoustic coupler may be purchased for about $285.

Terminal Rental.
Users who have short-term requirements may rent certain terminals through the Center. Teletype models ASR33 and KSR33 may be rented for periods from on month to one year or more for $50/month and $40/month respectively. A hardwired line connection can be made as described above or an acoustic coupler may also be rented for an additional $15 a month. At this time the Teletype model 43 and the CRT terminals are not available on a rental arrangement.

The Center has available two Porta-Com terminals for short-term rentals at $15 a week to $60 for one month. These are attaché-case-contained 110 baud keyboard-printers with an integral acoustic coupler. Arrangements can also be made to rent a Digi-Log terminal for $15 a week for presentations and class demonstrations. This machine has a full keyboard and acoustic coupler, but no display, and is intended to be used with a TV monitor or conventional TV set for group viewing.

Users with graphic, high speed or other special requirements should consult with Computer Center personnel before they decide to buy a terminal to insure compatibility with our technical and operating system requirements. Such equipment must also meet the criteria imposed by the State Executive Department for computing equipment and terminals.

EDUNET

Edunet, a computing network to serve the higher education community on a national basis, was developed in 1974 by Educom, a nonprofit organization at Princeton, New Jersey, formed to promote resource sharing among colleges and universities. Edunet makes it possible for students, faculty members, and administrators on any campus to gain access to specialized computing resources located at many other centers in the country.

An on-line directory of network services and means of accessing them is maintained by Edunet at the Stanford University Computer Center. Edunet also publishes a newsletter which describes its services and activities.

Professor Earl Ecklund, O.S.U. Department of Computer Science, used the Edunet system for his course CS 512X Software Systems in which an IBM computer was needed for a special project.

BMDP USERS

The quotation marks (") used in the manual are the multiple punch 11 5 8 on CYBER.

CROSS ASSEMBLERS AND SIMULATORS

We are presently installing the SIM/GEN and ASM/GEN packages developed by Colorado State University.

SIM/GEN is designed to allow a microcomputer programmer to generate a simulator for his micro for use during program checkout.

ASM/GEN is designed to allow the microcomputer programmer to develop and use a cross-assembler for his micro.

At this time simulators and cross-assemblers for the following micros are available.

INTEL 8080, INTEL 4040
National Semiconductor PACE
Scientific Microsystems Microcontroller.

Other assemblers or simulators will be developed as the need occurs.

If you have a need to develop an assembler or simulator using these packages that you feel may be useful to others, submit your request in writing to the Software Evaluation Committee, B. Hunteman, Computer Center. If the results of the committee review are favorable the Computer Center will assume all responsibility for implementing and maintaining the assembler or simulator.

Call the consultants at ext.3474 to obtain the latest information on the availability of manual or software.

SUMMER OPERATING HOURS

Due to energy concerns and reduced activity during the summer months, from 12 June to 2 October computer operating hours will be as follows:

Monday-Fridays	0730-0200
Saturdays	0800-1700
Sundays	1200-1800

Third shift rates, therefore, will apply only from 2300 to 0200 on week nights.

Users who have long jobs which will exceed this schedule should contact Dan Berg, Operations Supervisor (ext. 3584). Necessary arrangements to accommodate users' needs will be made.

OPERATING STATISTICS

	Feb 77	Feb 78
Batch Logons 3300	11361	9187
Batch Logons CYBER	17883	23693
Terminal Logons 3300	31889	22788
Terminal Logons CYBER	12537	15185
	Mar 77	**Mar 78**
Batch Logons 3300	10279	7192
Batch Logons CYBER	16668	19586
Terminal Logons 3300	29784	21212
Terminal Logons CYBER	14746	15181

CYBER TAPE UPGRADE COMING

The Center is planning to acquire new magnetic tape drives for the CYBER this summer. The new equipment will include four nine-track units and one seven-track drive. CYBER users who have privately owned seven-track tapes should watch for announcements about our plans for converting tapes to nine-track.

NEW CYBER COMPLOT VERSION RELEASED

A new version of CYBER Complot has been released recently which has several features which should be of value to our users. Some of these new features are listed below:

SUBROUTINE CHECK - checks an array of floating-point numbers and returns the algebraic minimum and maximum.

SUBROUTINE CIRCLE - draws an arc centered at a specified location and having a specified radius and length.

SUBROUTINE GRID - draws a set of X and Y axes in the same manner as AXIS except that grid lines are drawn in place of large tick marks.

SUBROUTINE METRIC - changes an internal conversion factor so that all Complot subroutines which are subsequently called and ordinarily expect to receive parameters expressed in inches will instead expect to receive parameters expressed in millimeters.

SUBROUTINE ORIGIN - redefines the location of the origin of the display.

SUBROUTINE RANGE (previously named SCALE1) - calculates rounded minimum and maximum values for a variable such that the intervals between the values are the customary 2, 5, or 10 units in length.

SUBROUTINE RANGEL - calculates rounded minimum and maximum values for a variable such that the interval between them is a whole number of base-10 logarithmic cycles.

SUBROUTINE SHADE - shades a rectangle with various combinations of horizontal, vertical, and diagonal lines.

SUBROUTINE SYMBEL - draws a string of characters. The character set includes Roman, italics, script, and Greek characters (both upper and lower case) as well as over 100 special characters. Control characters are used to change from one font or case to another. The entire character set is shown on the opposite page.

SUBROUTINE SYMWID - determines the width of a string of characters as they would be drawn by SYMBEL.

SUBROUTINE ZOOM - selects the boundaries of the plotting area to be displayed on the Tekterminal or the HP Plotter. This area must be smaller than, and completely contained within, the overall plotting area defined by SIZE. Since the area selected for display is scaled to fill the entire screen, greater detail is visible than when the entire plot is displayed.

Additional details concerning these and all other Complot subroutines can be found in the April 1978 edition of the CYBER Complot Manual which is now available for purchase at the Computer Center Business Office.

OSU CLASSES USE COMPUTER SIMULATIONS

Some classes at O.S.U. use model simulations developed by the Computer Center to enhance the process of learning. Classes range from family resource management to investment management to chromatography. The simulation models do just that: they simulate real situations in the real world. Students learn to effect changes in the model by controlling variables. For example, in the farm management model students learn how they may change the productivity of a 640-acre farm by controlling different aspects of management such as application of fertilizers, use of machinery and irrigation systems, and use and purchase of land. Such models demonstrate the interrelationships within most systems and the complex process of decision-making. Computers are uniquely suited for modeling purposes because of their capability of storing large amounts of data and keeping them in proper relationships.

If you wish to develop a simulation model for your class, call JoAnn Baughman at ext. 2161 for consultation. — E.T.D.

NEW MICROFICHE PROGRAM AVAILABLE

As described in the January/February, 1978, issue of Access, CYBER users have the capability of producing their printed output on 42X 105 mm microfiche instead of on paper using the conventional line printer. This is accomplished by writing the specially-formatted output on a magnetic tape and then sending the tape to the Executive Department in Salem where the actual microfiche is produced. A new utility program called FICHE is available on the LIBRARY user number which will read files prepared for conventional printing and write them on a magnetic tape in a format suitable for microfiche printing. A user-specified 60-character label and a two-character fiche sequence number appear at the top of each fiche in letters large enough to be read with the naked eye. Thus, virtually any file that can be printed on the line printer can now be printed on microfiche with a minimum of extra effort. In particular, compiler and assembler listings are well suited for this kind of processing.

The savings that can be effected using microfiche are quite significant, particularly if several copies of an output are required. The Executive Department charges $1.60 for each microfiche original and $0.09 for each copy. One microfiche holds 224 pages of printed output, and our experience indicates that it costs about $4.00 during the prime shift to generate a fiche tape containing this amount of information. By comparison, it would cost approximately $15.00 to print one copy of the 224 pages on the line printer during the prime shift.

Documentation on the program FICHE is available from Hilary Swingle, CC 142, and the consultants will provide assistance in using the program and arranging for the Executive Department to process the results.

APL--SHOULD WE--OR SHOULDN'T WE?

With the installation of level 4 to the NOS operating system later this year, support for the current APL interpreter will no longer be available. We would like to ascertain whether our users have sufficient interest in APL to warrant support under NOS level 4. Budgetary constraints make continuing support very difficult; expected cost is estimated to be more than $400/month. At the present time, there has been very little use of APL under NOS. No doubt this is due in part to the lack of APL terminals on this campus which necessitates 2 or 3 letter mnemonics be substituted for the APL symbols. In spite of the present low usage rate, we would like very much to hear from potential APL users who might be interested on an "if and when" basis.

To those of our users who may not be familiar with this particular programming language, the following capsule commentary may be of service. APL (Advanced Programming Language) is a vector and array-oriented language, with many primitive functions defined by single symbols, which lends itself to highly compact and symbolic coding. User-defined functions are easily formed to provide immediate answers to such problems as solving sets of simultaneous linear equations. The interpretive character of APL makes it an extremely sophisticated and powerful interactive problem-solving language.

If there is sufficient interest, it may be possible to provide an APL terminal--that is, a terminal which includes the extensive set of special characters--and to provide access to a remote time-sharing facility for use of the language. Of course, if there is sufficient long-term user demand we may be able to support APL locally.

Please send your comments to (or call) Ted Hopkins, ext. 2953, OSU Computer Center.

FACULTY WORKSHOP TO BE HELD SEPTEMBER 11-15, 1978

Oregon State University Computer Center will again sponsor a Faculty Workshop September 11-15, 1978. The workshop is intended for all who are engaged in undergraduate education, including universities, four-year colleges, and two-year colleges. The workshop will provide an opportunity for research and teaching faculty to increase their skills related to the use of the computer. It will provide a regional forum for the presentation, discussion, and dissemination of ideas, programs, and other curricular matters dealing with the instructional use of computers. Those attending this workshop need not have a background in computers. An attempt has been made to meet the needs of those with no background as well as those who have used the computer in some way. The purpose of this workshop is threefold:

1) To provide basic training in the development of computer skills in FORTRAN, BASIC, etc., on the OS-3 time-sharing system and CYBER 73 operating system.

2) To provide training in the development of user skills which will facilitate use of the computer within an academic area. These include the use of the plotter, files, IMSL, GRAFIT programs, OSCAR, SPSS, ARAND, SIPS and Library programs for both the CYBER 73 and the 3300.

3) To provide instruction and examples of the in-class use of computer curriculum modules in specific disciplines.

If you are interested in receiving more information or in attending this workshop, please call Courtenay Abell at ext. 2494.

POSITION OPENING AT COMPUTER CENTER

The members of the OSU Computer Center Publications Committee recently recommended to the Director the hiring of a part-time Documentation Specialist (D.S.) to administer the Center's documentation system. The D.S. would write or edit program documentation, prepare documentation for applications packages, and maintain a catalogue of both on-line and hard-copy documentation. Committee members feel that having a single individual at the Center be responsible for making necessary documentation available to users would improve our services. The D.S. will identify user needs, initiate new documentation, and interact with programmers and users in a constant updating effort.

The Director has approved the recommendations of the Publications Committee, and a detailed job description is available at the Center to interested individuals. Minimum qualifications are as follows: B.A. degree in English, journalism, or other appropriate fields in the Humanities and the equivalent of two years' experience as a computer programmer; or six years' combined college education, writing/editing experience and computer programming.

If you are qualified and wish to apply for this position or want additional information, contact:

C.C. Calligan
Assistant Director
Milne Computer Center
Oregon State University
Corvallis, OR 97331

Deadline for accepting applications is June 1, 1978.

[OSU is an Affirmative Action, Equal Opportunity Employer and complies with Sec. 504 of the Rehabilitation Act of 1973.]

CCUC/9 CONFERENCE

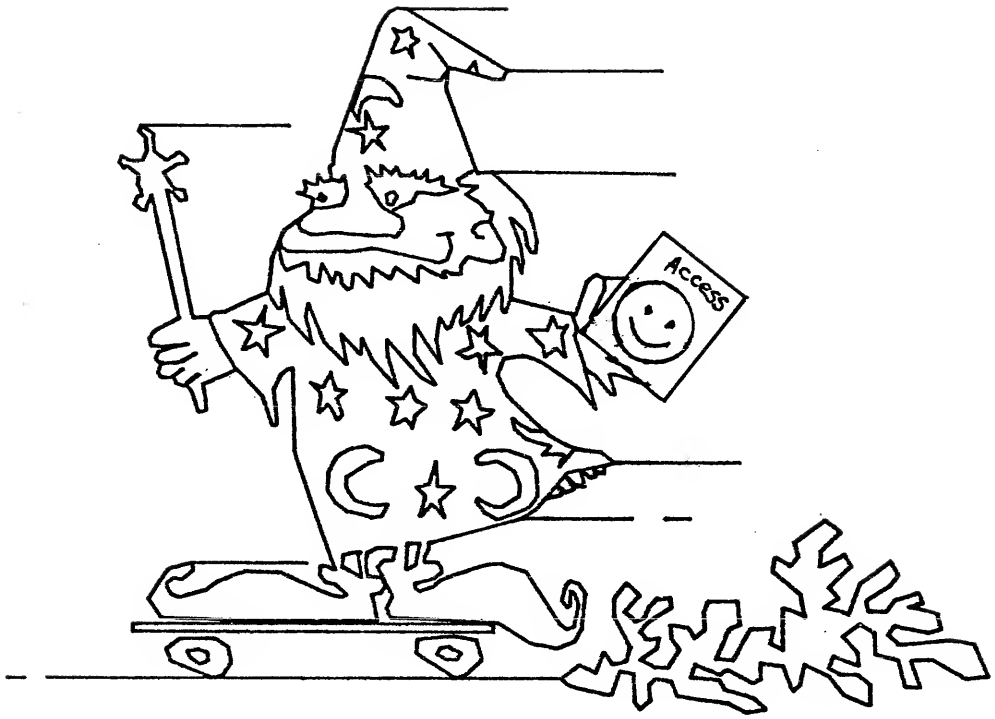
The ninth annual Conference on Computers in the Undergraduate Curriculum, CCUC/9, will be held 12-14 June at Denver University. The keynote speaker is Portia Isaacson from Electronic Data Systems in Dallas; her presentation is entitled "Personal Computing and Its Impact on Education."

Advance registration, including a copy of the proceedings, is:

Academic	$65
Students	$15
Non-academic	$90

Further information regarding CCUC/9 may be obtained be contacting:

William Dorn, Mathematics Department Telephone: (303)753-2580
Denver University
Denver, CO 80208



To Receive Access, the OSU Computer Center Newsletter:

If you wish to receive Access, please complete the following information and return this form to Jody Bowles, CC 224.

Name: _____

Address: _____

City, State: _____ Zip_____

Oregon State University
Milne Computer Center
Corvallis, Oregon 97331

Non-Profit Org.
U.S. Postage
PAID
Permit No. 200
Corvallis, OR 97331